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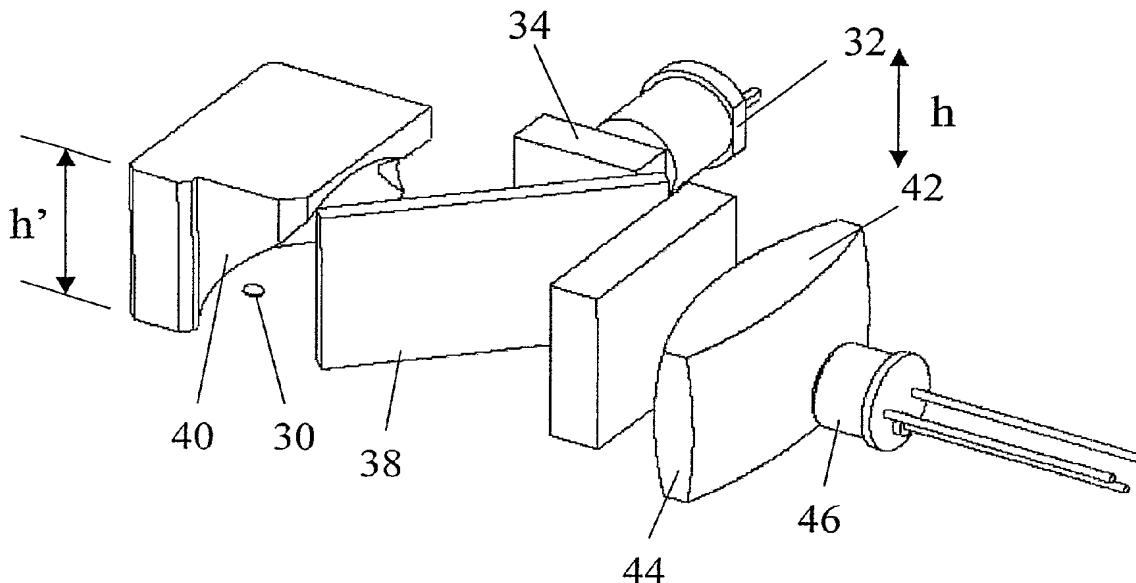
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(57) **Abstract:** In apparatus for the production and detection of fluorescence at a sample surface, the height of the apparatus above the sample surface is reduced, and loss of the emitted fluorescence due to reflection loss and light scattering is minimized. The apparatus comprises a three-dimensionally curved light reflecting surface (40) that directs light from a light source (32) transversely to its original path and focuses the light on to an illumination zone (30) at or below the sample surface. The reflecting surface (40) also collects, directs and at least partially collimates emitted fluorescence transversely to its original path and towards a detector (46).

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